

Serial No. 10/623,613  
Reply to Office Action dated March 15, 2007

Docket No. P-0564

**REMARKS**

Claims 1-2, 4, 6-7, 9-10 and 13-23 are pending in this application. By this Amendment, the specification and claims 1, 2, 4, 6-7, 10 and 13-19 are amended, claim 12 is canceled without prejudice or disclaimer and new claims 20-23 are added. Various amendments are made for clarity and are unrelated to issues of patentability.

**I. Rejection Under 35 U.S.C. §112**

The Office Action rejects claims 1-2, 4, 6-7, 9-10 and 12-19 under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. It is respectfully submitted that the above amendments to each of independent claims 1, 7, 14 and 17 obviates the grounds for rejection. That is, the claims are amended to be consistent with the specification and figures. Withdrawal of the rejection under 35 U.S.C. §112, first paragraph, is respectfully requested.

**II. Rejection Under 35 U.S.C. §103(c)**

The Office Action rejects claims 1-2, 4, 6-7, 9-10 and 12-19 under 35 U.S.C. §103(a) over U.S. Patent 5,946,386 to Rogers in view of U.S. Patent 4,783,796 to Ladd. The rejection is respectfully traversed with respect to the pending claims.

The applied references do not teach or suggest all the features of independent claim 1. More specifically, independent claim 1 relates to a short message service switching private branch exchange (PBX) system. The PBX system includes an office line interface unit of the PBX system, a voice mail interface unit of the PBX system, a control unit of the PBX system and an extension line interface unit of the PBX system. However, the features disclosed within Rogers clearly relate to a call management computer 101 separate from a PBX switch 104. See

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FIG. 1, for example. The features discussed within the Office Action as allegedly corresponding to the claims relate to the features within the call management computer 101 (as shown in FIG. 2) and not to features within the PBX switch 104. Furthermore, Roger's col. 17, lines 20-38 relates to conversion of features without converting existing PBX's. See, in particular, col. 17, lines 37-38. It is also respectfully noted that pages 1-4 of the present specification relate to problems of related art PBX's and that features discussed with respect to the remaining specification relate to a novel PBX system. On the other hand, Rogers relates to features outside of a PBX system. The rejection should be withdrawn at least for this reason.

Applicant also respectfully notes that independent claim 1 relates to specific features of a digital signal processor. As one non-limiting example, the present specification describes a digital signal processor being a shared DSP with various units within the PBX system. However, Rogers clearly discloses that the call management computer 101 operates based on a plurality of DSP processors 208 in order to perform respective features discussed in Rogers. See, for example, col. 18, lines 10-15. The Office Action cites the plurality of DSP processors 208 to show the alleged features of the claims. It is respectfully submitted that Rogers does not teach or suggest the features of the digital signal processor as recited in independent claim 1.

Still further, independent claim 1 recites that the digital signal processor converts the pulse code modulation format short message service signal transmitted from the office line interface unit into the short message service data by decoding, the digital signal processor converting the short message service data into a second pulse code modulation format short message service signal when the short message service data is to be transmitted to a single line

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terminal, and the digital signal processor outputs the short message service data as is when the short message service data is to be transmitted to a digital terminal. Rogers does not teach or suggest at least these features of independent claim 1 as Rogers does not teach or suggest converting the short message service data into a second pulse code modulation format short message service signal when the short message service data is to be transmitted to a single line terminal, and the digital signal processor outputs the short message service data as is when the short message service data is to be transmitted to a digital terminal. The Office Action (on page 10) appears to cite Rogers' FIG. 2 and col. 26, line 48-col. 27, line 5 for the cited features of the single line terminal and the digital terminal. However, the cited sections do not relate to converting into a second pulse code modulation format short message service signal or outputting of the short message service data as is based on whether the data is to be transmitted to a single line terminal or a digital terminal, respectively.

For at least the reasons set forth above, Rogers does not teach or suggest the features of independent claim 1 as alleged in the Office Action. Ladd does not teach or suggest the features of independent claim 1 missing from Rogers. Thus, independent claim 1 defines patentable subject matter.

Independent claim 7 recites determining whether a digital signal processor can be detected when an office line and a speech path are connected to each other, transmitting a short message service signal transmitted from the office line to the digital signal processor when the digital signal processor is detected, and determining an extension line terminal that will receive the short message service signal. Independent claim 7 also recites transmitting the short message

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service signal to the determined extension line terminal from the usable digital signal processor, waiting for a prescribed detection time when the digital signal processor is not detected, and finishing a reception of the short message service signal when the usable digital signal processor becomes available after the prescribed detection time has elapsed. Independent claim 7 also recites that the digital signal processor converts the received short message service signal into short message service data, and generates a short message service message corresponding to the extension line terminal according to a main processor. Still further, independent claim 7 also recites that the usable digital signal processor generates a pulse code modulation format short message service signal when the extension line terminal is a single line terminal, and generates the short message service data when the extension line terminal is a digital terminal.

For at least similar reasons as set forth above, the applied references do not teach or suggest all the features of independent claim 7. That is, Rogers does not teach or suggest the claimed digital signal processor. Rather, Rogers discloses a plurality of DSP processors 208 to allegedly perform the claimed features. Further, Rogers does not suggest generating a pulse code modulation format short message service signal when the extension line terminal is a single line terminal and generates the short message service data when the extension line terminal is a digital terminal. Ladd does not teach or suggest the features of independent claim 7 missing from Rogers. Thus, independent claim 7 defines patentable subject matter.

Independent claim 14 recites switching a pulse code modulation channel of an office line interface unit to a pulse code modulation channel of a digital signal processor if a speech path is

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connected to the office line interface unit, transmitting a short message service signal to the digital signal processor from the office line interface unit through the pulse code modulation channel, decoding the short message service signal transmitted to the digital signal processor, switching the pulse code modulation channel of the digital signal processor to a pulse code modulation channel of a single line terminal extension line interface unit when an extension line terminal that will receive the short message service signal is a single line terminal, and switching a short message service data channel of the digital signal processor to a short message service data channel of a digital terminal extension line interface unit when the extension line terminal that will receive the short message service signal is a digital terminal, wherein a control unit determines whether a digital signal processor resource of the digital signal processor is available when a speech path is connected, the control unit waiting for a prescribed time until the digital signal processor becomes available when the digital signal processor resource is not available, and finishes a reception of the short message service signal when the digital signal processor resource becomes available after the prescribed time has elapsed. Independent claim 14 also recites that the digital signal processor is only a single digital signal processor of the PBX system.

For at least similar reasons as set forth above, the applied references do not teach or suggest all the features of independent claim 14. More specifically, the applied references do not suggest all the features of the single digital signal processor of the PBX system. Thus, independent claim 14 defines patentable subject matter.

Independent claim 17 recites a single digital signal processor of a PBX system that receives a short message service signal in a first format and converts the short message service signal into a second format short message service signal, and a controller of a PBX system that controls the digital signal processor and determines the second format, wherein the digital signal processor converts the first format short message service signal into the second format short message service signal by converting the first format short message service signal into short message service data and converting the short message service data to the second format short message service signal, the converting the first format short message service signal into the short message service data comprising decoding, converting the short message service data into the second format short message service signal when the short message service data is transmitted to a single line terminal, and outputting the short message service data as is when the short message service data is transmitted to a digital terminal. Independent claim 17 also recites that the controller determines whether a digital signal processor resource of the single digital signal processor is available when a speech path is connected, waits for a prescribed time until the digital signal processor becomes available when the digital signal processor resource is not available, and finishes a reception of the short message service signal in the first format after the prescribed time has elapsed and the digital signal processor resource becomes available.

For at least similar reasons as set forth above, the applied references do not teach or suggest the features of independent claim 17. Thus, independent claim 17 defines patentable subject matter.

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Accordingly, each of independent claims 1, 7, 14 and 17 defines patentable subject matter. Each of the dependent claims depends from one of the independent claims and therefore defines patentable subject matter at least for this reason. In addition, the dependent claims recite features that further and independently distinguish over the applied references.

### **III. Request for Information**

The Office Action (on pages 24-25) requests that applicant provide information to identify products or services that embody the disclosed subject matter described on pages 1-5 of the present specification. Items 12 and 15 on page 24 appear to state the requested information is (admitted) prior art. However, applicant respectfully submits that pages 1-5 of the present specification describe related art and/or background art. Related art and background art does not correspond to admitted prior art.

However, in response to this request, applicant is providing a copy of “Access and Terminals (AT); Short Message Service (SMS) for PSTN/ISDN; Short Message Communication between a fixed network Short Message Terminal Equipment and a Short Message Service Centre;” ETSI ES 201 912 (V1.1.1) (2002-01) pages 2-88, dated 2002. This document is provided at the request of the Office Action and in accordance with 37 C.F.R. §105 to obtain additional information. The document is submitted in an Information Disclosure Statement and PTO Form-1449. As stated in the Office Action, the fee and certification requirements of 37 C.F.R. §1.97 have been waived. Applicant has provided this information with candor and good faith under 37 C.F.R. §1.56.

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**CONCLUSION**

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Favorable consideration and prompt allowance of claims 1-2, 4, 6-7, 9-10 and 12-19 are earnestly solicited. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney at the telephone number listed below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,



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